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PALB2 Antibody (Center) Blocking peptide

Synthetic peptide
Catalog # BP11688c

Specification

PALB2 Antibody (Center) Blocking peptide - Product Information

Primary Accession Q86YC2

PALB2 Antibody (Center) Blocking peptide - Additional Information

Gene ID 79728

Other Names
Partner and localizer of BRCA2, PALB2, FANCN

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PALB2 Antibody (Center) Blocking peptide - Protein Information

Name PALB2

Synonyms FANCN

Function
Plays a critical role in homologous recombination repair (HRR) through its ability to recruit BRCA2 and RAD51 to DNA breaks (PubMed:16793542, PubMed:19423707, PubMed:19369211, PubMed:22941656, PubMed:24141787, PubMed:28319063). Strongly stimulates the DNA strand- invasion activity of RAD51, stabilizes the nucleoprotein filament against a disruptive BRC3-BRC4 polypeptide and helps RAD51 to overcome the suppressive effect of replication protein A (RPA) (PubMed:20871615). Functionally cooperates with RAD51AP1 in promoting of D-loop formation by RAD51 (PubMed:20871616). Serves as the molecular scaffold in the formation of the BRCA1-PALB2-BRCA2 complex which is essential for homologous recombination (PubMed:19369211). Via its WD repeats is proposed to scaffold a HR complex

containing RAD51C and BRCA2 which is thought to play a role in HR-mediated DNA repair (PubMed:24141787). Essential partner of BRCA2 that promotes the localization and stability of BRCA2 (PubMed:16793542). Also enables its recombinational repair and checkpoint functions of BRCA2 (PubMed:16793542). May act by promoting stable association of BRCA2 with nuclear structures, allowing BRCA2 to escape the effects of proteasome-mediated degradation (PubMed:16793542). Binds DNA with high affinity for D loop, which comprises single-stranded, double-stranded and branched DNA structures (PubMed:20871616). May play a role in the extension step after strand invasion at replication-dependent DNA double-strand breaks; together with BRCA2 is involved in both POLH localization at collapsed replication forks and DNA polymerization activity (PubMed:24485656).

Cellular Location
Nucleus Note=Colocalizes with BRCA2 and BRCA1 in nuclear foci

PALB2 Antibody (Center) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

PALB2 Antibody (Center) Blocking peptide - Images

PALB2 Antibody (Center) Blocking peptide - Background

This gene generates several transcript variants whichdiffer in their first exons. At least three alternatively splicedvariants encoding distinct proteins have been reported, two ofwhich encode structurally related isoforms known to function asinhibitors of CDK4 kinase. The remaining transcript includes analternate first exon located 20 Kb upstream of the remainder of thegene; this transcript contains an alternate open reading frame(ARF) that specifies a protein which is structurally unrelated tothe products of the other variants. This ARF product functions as astabilizer of the tumor suppressor protein p53 as it can interactwith, and sequester, MDM1, a protein responsible for thedegradation of p53. In spite of the structural and functionaldifferences, the CDK inhibitor isoforms and the ARF product encodedby this gene, through the regulatory roles of CDK4 and p53 in cellcycle G1 progression, share a common functionality in cell cycle G1control. This gene is frequently mutated or deleted in a widevariety of tumors, and is known to be an important tumor suppressorgene.

PALB2 Antibody (Center) Blocking peptide - References

Kovacs, E., et al. Proc. Natl. Acad. Sci. U.S.A. 107(12):5429-5434(2010)Irvine, M., et al. Cell Cycle 9(4):829-839(2010)Zhang, H.J., et al. J. Cell. Biochem. 106(3):464-472(2009)Ivanchuk, S.M., et al. Cell Cycle 7(12):1836-1850(2008)Bandyopadhyay, K., et al. Biochemistry 46(49):14325-14334(2007)